

REMARKS

This **Draft** Amendment is in preparation for an Interview with the Examiner and in response to a Final Office action mailed on August 8 2005 (Paper No. 20050729). Upon entry of this amendment, claims 1-11, 13 and 16-22 will be pending. Applicant has canceled claims 14 and 15 without prejudice or disclaimer as to their subject matter by this amendment and amended claims 1, 7, 10 and 11 by this amendment.

In the present Office action, the Examiner has rejected claims 1, 2, 4, 6, 8, 9, 16 and 17 under 35 U.S.C. 103 (a) as being unpatentable over Reneris in view of Iga. Applicant has the following comments in addition to addressing and responding to the Examiner's "Response to Arguments" on pages 2-4 of Paper No. 20050729.

Issue 1: Does prior art (Iga) teach, "a composition memory for setting an instruction pointer of the central processing unit to a specific region of the main memory storing the boot image" as claimed by Applicant in claim 1?

Regarding claim 1, Applicant claims "a composition memory for setting an instruction pointer of the central processing unit to a specific region of the main memory storing the boot image, wherein the central processing unit loads the boot image from the specific region of the main memory in response to the instruction pointer, allowing an operating system to perform control functions." On Page [[8]] 9-10 of the present Office

action, the Examiner states that this limitation is found at column 4, lines 16-22 and lines 32-36 of Iga without any further explanation as to what reference numbers, line numbers etc of Iga correspond to Applicant's composition memory. Further, Applicant has studied the entire reference of Iga and cannot find any comparable feature in Iga that can correspond to Applicant's composition memory that has the location in main memory where the boot image is stored. Applicant therefore submits that neither Iga nor Reneris nor the combination thereof fairly teaches or suggests Applicant's composition memory that has the location in main memory where the boot image is stored. For these reasons, the rejection to claim 1 must be withdrawn.

Applicant has raised this very same argument in the July 13, 2005 amendment but to no avail. In Paper No. 20050729, the Examiner never acknowledged to this argument nor did the Examiner respond to this argument. Applicant submits that this is in violation of MPEP 707.07 (f) and 37 C.F.R. 1.104 (b).

Issue 2: Would one having ordinary skill in the art be inclined to turn to Iga to fill in for the deficiencies of Reneris?

Again regarding claim 1, Applicant further submits that one having ordinary skill in the art would not be motivated to turn to Iga to fill in for the deficiencies of Reneris. The reason is in Reneris, the device states that are saved before powering down the

computer are different each time the computer is powered down. In other words, the device states in Reneris vary each time the computer is powered down, and are thus not fixed. However, in Iga, the codes are read out of ROM 13, and are thus fixed throughout the life of the computer because the contents of a read only memory can never be changed. Because of this, Applicant submits that if Reneris were to be modified according to Iga, Reneris would be destroyed as device states could no longer be saved because it would be only the initial state of these devices that are reinstated upon booting. Therefore, the rejection of claim 1 must be withdrawn.

In the present Office action, the Examiner rejected claims 10 and 13 under 35 U.S.C. 103 (a) as being unpatentable over Iga in view of USP 6,122,734 to Jeon. Applicant has the following comments.

Issue 3: Does Iga teach “a basic input/output system memory setting the instruction pointer” as claimed by Applicant in claim 10?

Regarding claim 10, Applicant claims, “a basic input/output system memory setting the instruction pointer”. On page [[16]] 15 of Paper No. 20050729, the Examiner states that this limitation is taught by column 4, lines 16-22 of Iga. Applicant disagrees.

Applicant has reviewed column [[14]] 4, lines 16-22 of Iga along with the entire

reference of Iga and cannot find any evidence of ROM 13 of Iga or any other memory in Iga that is used to set an instruction pointer of where in cache 22 the codes are stored. Applicant submits that the entire reference to Iga is silent as to how the processor of Iga knows at what address in cache 22 the codes are stored. In claim 10, Applicant claims that this address is stored [[in]] and found from BIOS memory. Applicant submits that there is no teaching in Iga of finding where in cache 22 the codes are stored from a BIOS memory. Because the applied prior art fails to teach or suggest this feature, the rejection of claim 10 cannot stand.

In paragraph 5 of Paper No. 20050729, the Examiner responded to this argument by saying, "Iga teaches the storage content (BIOS codes) of ROM are copied to the cache (Iga: column 4, line 16-17) to significantly reduce the system boot time (Iga: Column 4 line 35-36)." Applicant submits that the Examiner entirely missed Applicant's point in Applicant's traversal of July 13 regarding the rejection of claim 10. Applicant submits that Iga fails to teach the instruction pointer pointing to exactly where in the cache the BIOS codes are stored. This feature is missing from Iga and from both examinations. Applicant submits that Iga does not teach the instruction pointer and does not teach an instruction pointer pointing to the BIOS codes.

Issue 4: Would one having ordinary skill in the art be inclined to turn to Jeon to fill in for the deficiencies of Iga?

Regarding claims 10 and 13, the Examiner uses Iga to reject every limitation of claim 10 except for the “checking initializing steps and faults of the hardware components of the computer”. The Examiner turns to Jeon for a teaching of this feature and justifies the combination by saying that Jeon teaches providing a CD-ROM disk for both booting and computer repair. Applicant disagrees. Applicant submits that one having ordinary skill in the art would not be inclined to turn to Jeon to fill in for the deficiencies of Iga.

Iga seeks to save time by transferring boot codes from ROM to a higher speed memory. Jeon pertains making a CD-ROM that contains both boot programs and application programs on a single CD. Applicant submits that one having ordinary skill in the art would not be inclined to turn to a reference that pertains to making bootable CDs and application CDs on a single CD to fill in for the deficiencies of a reference that pertains to reducing booting time by copying boot codes from a ROM in a computer to a faster memory. Applicant submits that having application programs on the boot CD does not serve to save boot time. Also, Applicant submits that Iga never discusses loading application programs from a CD. Iga never even mentions CDs not to mention a method of making CDs. Because of the dissimilarity between these two references, Applicant submits that there is no credible motivation to combine Jeon with Iga to reject Applicant’s claims. Therefore, the rejection of claim 10 must be withdrawn.

In paragraph 6 of Paper No. 20050729, the Examiner responded to this argument by saying that it would be obvious to combine because having the boot software on a CD ROM would save time loading. Applicant disagrees.

Applicant submits that neither Jeon nor Iga teach or suggest that having the boot software on a CD ROM instead of another ROM would save any time. This is important as MPEP 2143 states that the motivation must be in the references themselves. Applicant submits that neither Jeon nor Iga teach or suggest that having boot software in a CD saves time. Applicant submits that the Examiner is merely speculating in paragraph 6 of Paper No. 20050729 that having the boot software on a CD saves time booting.

Applicant further submits that Iga teaches moving boot software from ROM to either RAM or a cache to save time in booting. Applicant submits that there is no statement in Iga as to why one would want to further improve boot time by having the boot software in some other medium such as a CD. Iga is devoid of any teaching as to why one would prefer to have a boot image on a CD ROM over the arrangement of Iga. For these reasons, Applicant submits that the motivation to combine Jeon with Iga is entirely lacking.

Issue 5: Would one having ordinary skill in the art be inclined to turn to Gharda to fill in for the deficiencies of Iga?

Regarding claims 14, 15 and 20, the Examiner has finally rejected claims 14, 15 and 20 under 35 U.S.C. 103 (a) as being unpatentable over Iga in view of USP 6,009,520 to Gharda. The Examiner relies on Iga for a teaching of every feature except the reading out the boot image in compressed format. The Examiner justifies the combination by citing column 1, lines 36-42 of Gharda and saying that Gharda also seeks to achieve a faster boot. Applicant disagrees.

Applicant submits that Gharda as a whole is about providing an improved BIOS that can be edited when a plug in module is attached. Gharda is not about speeding up a boot process. As a whole, Gharda pertains to an entirely unrelated problem than speeding up a boot. Applicant submits that one having ordinary skill in the art would not be inclined to turn to a reference that pertains to allowing third parties to customize a BIOS easily to fill in for deficiencies of a reference that pertains to improving boot speed.

In paragraph 7 of Paper No. 20050729, the Examiner responded to this argument by saying, “Gharda teaches an improved method to speedup the booting process for BIOS to be compressed in a ROM chip and for BIOS routines to be shadowed to system RAM where the routines may be accessed and executed in much higher speeds than is possible running directly from ROM (Gharda: see for example, Column 1 Line 36-42).” Applicant disagrees.

The Examiner relies on Gharda for a teaching of the BIOS routines are stored in ROM in compressed format. Applicant submits that there is no teaching in either Gharda or Iga that storing boot software in ROM in compressed as opposed to decompressed format speeds up a booting process. This is important as MPEP 2143 states that the motivation must be in the references themselves. Applicant submits that the Examiner is merely speculating that compressed boot software stored in ROM is faster to boot than decompressed software stored in ROM. Applicant submits that if anything, compressed format slows the boot process down as the boot software has to be decompressed, which is an extra step and is thus time consuming. For this reason, Applicant submits that there is no credible motivation to combine Gharda with Iga.

In paragraph 7 of Paper No. 20050729, the Examiner cites column 1, lines 36-42 of Gharda to support the motivation to combine. Column 1, lines 36-42 of Gharda state, "As a result of system development it is now common in state-of-the-art systems for BIOS to be compressed in a ROM chip, and for BIOS routines to be shadowed to system random-access memory (RAM) where the routines may be accessed and executed and much higher speeds than is possible running directly from ROM."

To begin with, this entire passage of Gharda does not at all pertain to compressed boot software. This is important because Gharda is relied on solely for the compressed storage of boot software and there is no link between compressed software and speeding

up a boot.

Second, this portion of Gharda is taken from the Background section of Gharda and not from Gharda's invention. This passage of Gharda merely recites a well known fact that accessing boot software in RAM is faster than accessing the same boot software from ROM. This has nothing to do with Iga's invention, Gharda's invention, Applicant's invention or with compression of boot software. In no way does this passage of Gharda support any motivation to combine Gharda with Iga. Therefore, the rejection must be withdrawn.

In Paper No. 20050729, the Examiner has rejected claims 7 and 18 under 35 U.S.C. 102 (b) as being anticipated by USP 5,784,628 to Reneris. Applicant has the following comments.

Issue 6: Does Reneris teach “reading out a boot image from the boot image storage device” as claimed by Applicant in claim 7?

Regarding claim 7, Applicant claims “reading out a boot image from the boot image storage device”. In Paper No. 20050729, the Examiner states that this feature is found at column 16, lines 55-56 of Reneris. Applicant disagrees. Applicant submits that column 16, lines 55-56 of Reneris states, “saving the device state of the device in the

memory storage area;”. Applicant is claiming reading, not saving. Applicant submits that there is no comparable reading step in Reneris. Because of this, Applicant submits that the claim rejection to claim 7 in Paper No. 20050729 is without merit.

Applicant argued this very same argument in the amendment filed on July 13, 2005 to no avail. The Examiner has never responded to this argument and has never identified what reference numeral, what column number or line number in Reneris corresponds to Applicant’s boot image memory for the rejection of claim 7. Further, the Examiner has failed to show where in Reneris this reading step is taught. For these reasons, Applicant submits that Paper No. 20050729 is an incomplete office action.

Issue 7: Again regarding claim 7, does Reneris’ device states read on Applicant’s boot image?

In the July 13, 2005 amendment, Applicant argued that the devices states of Reneris cannot read on Applicant’s claimed boot image. On pages 2 and 3 of Paper No. 20050729, the Examiner disagreed and stated that the device states of Reneris reads on Applicant’s “boot image”. Applicant disagrees for the following reasons.

As admitted by the Examiner on Page 2 of Paper No. 20050729, the boot image usually includes the operating system. Applicant submits that whether a few devices are in one of power up, power query, power suspend, power hibernate and power down states

cannot hardly be considered an operating system. Operating systems usually contain application programs etc. Mere states of devices cannot read on these application programs. In fact, the device states of these devices has nothing to do with an operating system.

Although it may be possible for device states to be included in a boot image, Applicant submits that the device states of Reneris cannot be considered to be a boot image. On Page 2 of Paper No. 20050729, the Examiner attempts to define a "boot image" as "a sequence of bits". Then, the Examiner takes this statement and tries to apply it by stating that the device states of Reneris can be considered to be a sequence of bits and thus read on a boot image. Applicant disagrees. Applicant submits that any sequence of bits can not be considered to read on a boot image. A boot image is much more narrow than a mere sequence of bits. A boot image must be 1) stored on a boot device, 2) must be used to boot a computer, 3) contain an operating system that contains application programs, and 4) the bits represent a contents of RAM, often an initial contents of RAM. Applicant submits that each of 1-4 are missing in the device states of Reneris.

As admitted by the Examiner on Page 2 of Paper No. 20050729, the boot image is defined as being on a boot device. Although Applicant claims this boot device, the Examiner has failed to show what feature in Reneris corresponds to this boot device. Applicant submits that this failure on the part of the Examiner is another reason why the

device states of Reneris cannot read on Applicant's boot image.

Applicant further submits that a boot image is used to boot a computer. Applicant submits that whether a few devices that are in one of power up, power query, power suspend, power hibernate and power down states cannot hardly be considered something to boot a computer and thus can not be held to constitute a boot image.

Further, Applicant submits that the "device state" of Reneris is gleaned from the device itself, not from a boot image memory as claimed by Applicant and as in the Examiner's definition of "boot image". When many devices are checked in Reneris, the device states come from the many devices and are scattered all over the place and are not derived from a boot image memory as in Applicant's claimed invention. Therefore, Applicant submits that there is no comparable "boot image storage device" in Reneris. For this reason, the rejection of claim 7 must be withdrawn.

Applicant further submits that the devices themselves, where the device states are gleaned from in Reneris, cannot be considered to be a "boot device". A boot device is a device that gets a computer up and running, kick starting itself from simple startup processes to a fully operating system. Applicant submits that the devices themselves in Reneris cannot be considered to get a computer up to a full operating system. Because Reneris lacks a boot device, the devices states of Reneris cannot be considered a boot

image.

Regarding claim 11, Applicant has amended claim 11 by this amendment to include the limitations of former depending claims 14 and 15 to place claim 11 in better condition for appeal.


Applicant has also amended claims 1, 7 and 10 by this amendment. **An 8th issue for the Interview is whether the Examiner is willing to enter the proposed amendments of claims 1, 7 and 10 after Final.**

No fees are incurred by the submitting of this draft Amendment.

In view of the above, it is submitted that the claims of this application are in condition for allowance, and early issuance thereof is solicited. Should any questions remain unresolved, the Examiner is requested to telephone Applicant's attorney.

Applicant requests a date and a time for a personal interview in response to the submission of this draft amendment after final to the Examiner.

Respectfully submitted,



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